

CLAIMS

1. A method for compressing a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the method comprising the steps of:
 - assigning at least said data parts with codes having less values than said first values,
 - replacing said data parts in said data set by said assigned codes and producing a compressed data set.
2. The method according to claim 1, wherein said markup hierarchy refer to a reference comprising a second markup hierarchy, which are resolved and assigned with codes.
3. The method according to claim 1, wherein each code is unique.
4. The method according to any of preceding claims, wherein each code replacing a markup hierarchy in said data set is assigned a value pointed out by said markup hierarchy.
5. The method according to claim 1, wherein a code replacing a markup hierarchy in said data set is assigned a value comprised by a reference pointed out by said markup hierarchy.
6. The method according to one of claims 4 or 5, wherein a value pointed out by a markup hierarchy in said data set is one of a limited set of values defined in said data set, where each value is assigned a code that replaces said value in said data set.
7. The method according to any one of claims 4 or 5, wherein a value pointed out by a markup hierarchy in said data set is a number and replaced by a numerical representation.
8. The method according to claim 1, wherein said definition part is a document type definition (DTD) or an XML-schema and said data set is a markup document.
9. The method according to claim 8, wherein said markup document is structured according to a markup language as XML, SGML or similar.

10. A method of transmitting a data set from a first application to a second application, said data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the method comprising the steps of:
 - generating a set of codes as a compression key defining said data parts defined in said definition part with codes having less values than said first values,
 - storing said set of codes,
 - assigning at least said markup hierarchy with said set codes,
 - replacing said data parts in said data set by said assigned codes and producing a compressed data set, and
 - transferring said compressed data set and said set of codes to said second application.
11. The method of claim 10, wherein said set of codes and said compressed data are transferred in packages.
12. The method of claim 11, wherein a package comprises at least a message type field, transmitting receiving application identity field, compression key and compressed data.
13. The method of claim 12, wherein a package further comprises a message version field, and contains information sent to the Compression Handler (510), for handling key compression.
14. The method of claim 10, wherein said compression key is transmitted once or several times with each compress data transmission compressed with respect to said compression key.
15. The method according to any of claims 10 to 14, wherein said compression key is compressed.
16. The method according to any of claims 10 to 15, wherein said compressed data is compressed in an additional step.
17. A system for data transmission between at least two stations, said data comprising a compressed data set according to any of preceding claims, the system comprising:
 - a Compression part, comprising:

- o a compression Handler (510) for initiating a compression procedure,
- o a Key Handler (520) for generating and handling keys corresponding to codes;
- o a Storage device (10, 525) for handling storage of generated keys,
- o a Converter (530) for implementing a first step in coding of the data set to be compressed by mean of the keys;
- o an Optimizer (535) for implementing a second step in optimlizing the data set to be compressed,
- o a Compressor (540) for implementing a third step of compression itself,

- a Transmission part, comprising:

- o a Transmitter (550) for handling all communication,
- o a Packet handler (555) for generating messages with respect to a Packet (570) for transmission and reception,
- o an interface (560) for listening to data transmission.

18. The system of claim 17, further comprising a Compression Key (575) handler, Compression document handler (580), a non compressed data set handler (585) and a Protocol handler (590).

19. The system of claim 17, wherein the Transmission Part handles the generation of a unique Application Identity, so that a receiver can identify incoming data and also the keys having unique identity.

20. A program storage device readable by a machine and encoding a program for compressing a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, programme comprising:

- an instruction set for assigning at least said markup hierarchy defining said data parts defined in said definition part with codes having less values than said first values, and
- an instruction set for replacing said data parts in said data set by said assigned codes and producing a compressed data set.

21. A computer readable program code means for causing a computer to compress a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the computer readable program code means comprising:

- an instruction set for assigning at least said markup hierarchy defining said data parts defined in said definition part with codes having less values than said first values, and
- an instruction set for replacing said data parts in said data set by said assigned codes and producing a compressed data set.

22. An article of manufacture comprising a computer useable medium having computer readable programs code means embodied therein for causing a compression of a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the computer readable program code means in said article of manufacture comprising:

- an instruction set for assigning at least said markup hierarchy defining said data parts defined in said definition part with codes having less values than said first values, and
- an instruction set for replacing said data parts in said data set by said assigned codes and producing a compressed data set.

23. A propagated signal comprising a computer readable programs code means for causing a compression of a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the computer readable program code means in said propagated signal comprising:

- an instruction set for assigning at least said markup hierarchy defining said data parts defined in said definition part with codes having less values than said first values, and
- an instruction set for replacing said data parts in said data set by said assigned codes and producing a compressed data set.

24. A computer readable medium having stored therein a protocol with plurality of messages for obtaining compressed data from a remote application, the protocol comprising:

- a request message for receiving a set of compressed data set,
- a request for receiving a set of codes used for compressing said compressed data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, at least said markup hierarchy defining said data parts defined in said definition part being assigned with codes having less values than said first values, and said data parts being replaced in said data set by said assigned codes,
- a response comprising said compressed data and said codes,

- a response comprising identity of application and unique identity of codes.

25. A communication system comprising a first unit (710) controlling a second unit (720) communicating through communications network (730), said first unit sending a data set having a markup hierarchy and comprising data parts having first values, said data set being arranged according to a definition part, the system further comprising a compressing unit (760) and decompressing unit (770), wherein said compressing unit is arranged to:

- assign at least said data parts with codes having less values than said first values,
- replace said data parts in said data set by said assigned codes and producing a compressed data set.

26. The system of claim 25, wherein said first unit (710) is any of a mobile station, a mobile phone, a palm size computer, a computer or similar,

27. The system of claim 25, wherein said first unit (710) is a remote control or monitoring device.

28. The system of claim 25, wherein second unit (720) is a remotely controlled arrangement such as robot, a vehicle, a missile.